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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/224,340	12/31/1998	MARIO DIMARCO	A62-17022-US	3803

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EXAMINER

DINH, TUAN T

ART UNIT PAPER NUMBER

2827

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/224,340

Applicant(s)

DIMARCO, MARIO

Examiner

Tuan T Dinh

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, lines 2-3, it is unclear. The phrase of "when said screws are tightened to apply a predetermined amount of force...said chassis" is not understood. How do the screws can be applied the predetermined amount of force? What cause the screws when they tightened to apply the determined amount of force?

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 13, and 22-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mazura (U. S. Patent 5,375,724).

**As to claims 1, 13, 22-24**, Mazura discloses an enclosure (1-figure 1, column 3, line 60) consider as an integrated modular cabinet as shown in figures 1-3 comprising:

a plurality of printed circuit board (PCB) modules (2-figure 1, column 3, line 61), wherein each PCB module (2) include a faceplate (8-figure 1, column 4, line 8), and a connector assembly (not shown, column 4, lines 11-13) disposed opposite said faceplate such that PCB module is enclosure; and

a chassis comprising top (6), bottom, and side walls (4), and front, wherein said front (see figure 1) of said chassis is configured with slots (3, column 4, lines 14-15) for receiving said plurality of PCB modules (2), wherein said PCB modules (2) and each faceplate (8) of said module create a seal with said chassis (column 1, lines 41-46, column 4, lines 1-32), and wherein said seal is resistant to EMI (figures 2-3, column 4, lines 25-31).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-5, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazura in view of Harris (U. S. Patent 5,546,273).

**As to claim 2**, Mazura discloses the cabinet as shown in figures 1-3, wherein each of said plurality of PCB module (2) further comprising:

said faceplate (8) having first and second ends (see figure 2); and  
a first screw (19-figure 1, column 4, line 38) attached to the first end.

Mazura does not disclose a second screw attached to the second end.

Harris shows a PCB module (70) comprising a faceplate (74) having first and second screws (90) attached to first and second ends disclosed in figures 1-9.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have first and second screws attached to a faceplate of a PCB module as taught by Harris to employ the cabinet of Mazura in order to secure a PCB to a chassis of a system.

**As to claim 3**, Mazura discloses the cabinet as shown in figures 1-3 wherein said first screw (19) is configured as a jackscrew

**As to claim 4**, Harris shows first and second screw (90) are configured to clutch when said screws are tightened to apply a predetermined amount of force between said faceplate (8) of said printed circuit board module and said cabinet.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have first and second screws tightened to a faceplate of a PCB module as taught by Harris to employ the cabinet of Mazura in order to reduce force when secure a PCB to a chassis of a system.

**As to claim 5**, Mazura and Harris disclose and satisfy all of the claimed invention, except for the predetermined amount of force is about 70 pounds per screw. It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the force to fastening the screw on the module for secured the module within cabinet, since it has been held that discovering an optimum value of a

result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

**As to claims 19-20**, Mazura does not disclose said top and bottom panel (6) are configured with a plurality of guide rails (3) and each of one guide rail centrally mounted on the top and bottom panels.

Harris shows guide rails (52) mounted to top and bottom panels (30, 32) and centrally mounted on the top and bottom panels.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use guide rails in a chassis as taught by Harris to employ the cabinet of Mazura in order to provide a guiding PCB modules inserted into the chassis of the system.

7. **Claims 6-7 and 9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazura in view of Martin (U. S. Patent 5,424,916).

Mazura does not show the module having first and second printed circuit boards connected to the connector assembly without using ribbon cables, the connectors with surface mounted leads at position 90 degrees. Martin shows a module (30) having first and second printed circuit boards (32-34-figure 2) connected to a connector assembly (50) with 90 degrees lead and without using ribbon cables.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cabinet of Mazura and provide the module having more than one circuit board connected to the connector assembly as taught by Martin in

order to reduce an electrical connection between two boards and backplane connector of the cabinet.

8. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazura (U. S. Patent 5,375,724) in view of McCarthy et al. (U. S. Patent 5,398,822).

**As to claims 14-15**, Mazura discloses and satisfies all of the limitation of the claimed invention, except for showing the interchangeable of the top and bottom panels and two side of the panels, where a part of the cabinet may be relocated without modification to the operation of the cabinet, such a relocation is considered to have been within the skill of art. *In re Japikse*, 86 USPQ 70 (1950).

**As to claims 16-17**, Mazura discloses all of the limitations of the claimed invention, except for said top and bottom panels are configured with a plurality of ventilation holes for cooling said PCB modules, and are sized to be resistant to EMI and RFI.

McCarthy shows the cabinet as shown in figures 2-6 wherein said top and bottom panels are configured with a plurality of ventilation holes (55-figure 3) for cooling said PCB modules (81), and wherein said ventilation holes are sized to be resistant to EMI and RFI.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a plurality of ventilation holes as taught by McCarthy to modify the cabinet of Mazura in order to provide heat dissipation from modules and also against EMI.

**As to claim 18**, McCarthy discloses the cabinet including the hole and satisfies all of the limitation of the claimed invention, except for the size of the hole. It would have been obvious matter of design choice to make as small (diameter) as possible to reduce the amount of space, since such a modification would have involved a mere change in this size of the hole. The change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

9. **Claims 12 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazura in view of Martin and further in view of McKenzie (U. S. Patent 4,002,386).

Mazura and martin disclose and satisfy all of the claimed invention, except for the flexible handle mounted on the faceplate of the module. McKenzie teaches the flexible handle (24) as shown in figures 2 and 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cabinet of Mazura and Martin and provide the flexible handle as taught by McKenzie in order to handle the module inserted or removed from the cabinet.



***Response to Arguments***

10. Applicant's arguments filed 6/19/02 have been fully considered but they are not persuasive.

**Applicant argues:**

(a) Regarding claim 1, 13, and 22-24, Mazura fails to disclose "each PCB module include a faceplate and a connector assembly disposed opposite such that each PCB module is enclosed"

(b) Regarding claims 2-4, Mazura does not disclose "first and second screws attached to a faceplate of a PCB module"

(d) Regarding claims 19-20, Mazura does not disclose "each slot in said chassis having guide rails mounted on top and bottom panels, and centrally mounted with respect to each slot"

**Examiner disagrees.**

Response to argument (a), Mazura discloses a component-carrier (1-figure 1) as a chassis or an enclosure comprising PCB modules (2), each PCB module (2) comprises a faceplate (8) and a connector (not shown) disposed opposite the faceplate. Each PCB module is plug into the component-carrier to make communication each other (column 4, lines 11-13); therefore, each PCB module assembling the faceplate and the connector being formed one unit module to insert into the component-carrier.

Response to argument (b), applicant's arguments with respect to claims 2-4 have been considered but are moot in view of the new ground(s) of rejection.

Response to argument (d), applicant's arguments with respect to claims 2-4 have been considered but are moot in view of the new ground(s) of rejection.

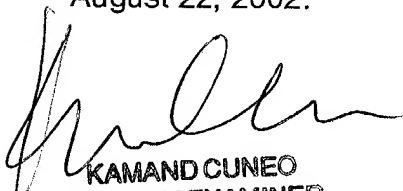
**Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-3431 for regular communications and 703-308-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD  
August 22, 2002.

  
KAMAND CUNEO  
PRIMARY EXAMINER